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JAN 2 1 2003

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:      Shimkets *et al.*

SERIAL NUMBER:  10/028,248          EXAMINER:   Not yet assigned

FILING DATE:    December 19, 2001   ART UNIT    1643

FOR:            NOVEL NUCLEIC ACIDS AND POLYPEPTIDES AND METHODS OF USE THEREOF

**BOX SEQUENCE**
U.S. Patent and Trademark Office
P.O. Box 2327
Arlington, VA  22203

## TRANSMITTAL LETTER

The following are enclosed herewith for filing in the above-identified application:

1. Response to Notice to Comply with Sequence Disclosure Requirements (2 pgs.);

2. Copy of the Notice to Comply with Sequence Disclosure Requirements (1 pg.) and the Raw Sequence Listing Error Report (12 pgs.);

3. Substitute Paper Copy of the "Sequence Listing" (290 pgs.);

4. Substitute Computer Readable Form Copy of the "Sequence Listing" (1 diskette);

5. Statement in Support of Computer Readable Form Submission Under 37 C.F.R. § 1.821(f) (1 pg.);

6. Supplemental Preliminary Amendment (2 pgs.); and

7. Return postcard.

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned at the number below.
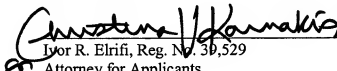
**30623**
PATENT TRADEMARK OFFICE

Applicants believe that no fees are due with this filing. However, the Commissioner is hereby authorized to charge any fees that may be due, or credit any overpayment of same, to Deposit Account No. 50-0311, Reference No. 21402-222. A duplicate copy of this transmittal letter is enclosed.

Respectfully submitted,

Dated: January 21, 2003

Ivor R. Elrifi, Reg. No. 39,529     *Reg. No. 451899*
Attorney for Applicants
c/o     MINTZ, LEVIN
        One Financial Center
        Boston, Massachusetts 02111
        Tel: (617) 542-6000
        Fax: (617) 542-2241

TRA 1754522v1

2

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Shimkets *et al.*

SERIAL NUMBER: 10/028,248    EXAMINER: Not yet assigned

FILING DATE: December 19, 2001    ART UNIT 1643

FOR: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES AND METHODS OF USE THEREOF

BOX SEQUENCE
U.S. Patent and Trademark Office
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Arlington, VA 22203

## RESPONSE TO NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCES AND/OR AMINO ACID SEQUENCES DISCLOSURES
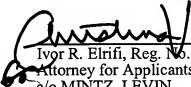
In response to the Notice, mailed December 4, 2002, in the above-referenced application, Applicants submit herewith the following:

- a copy of the Notice to Comply with Sequence Disclosure Requirements (1 pg.), and the Raw Sequence Listing Error Report (12 pgs.);

- a substitute paper copy of the Sequence Listing (290 pgs.);

- a substitute computer readable form (CRF) copy of the Sequence Listing (1 disk);

- a statement in support of the CRF, in compliance with 37 C.F.R. §§ 1.821-1.825 (1 pg.); and

- a Supplemental Preliminary Amendment (2 pgs.).

The present Response is due on or before February 4, 2003. Applicants believe that no fees are due with this filing. However, the Commissioner is hereby authorized to charge any fees that may be due, or credit any overpayment of same, to Deposit Account No. 50-0311, Reference No. 21402-222 (Cura-522)

Respectfully submitted,

Dated: January 21, 2003

Ivor R. Elrifi, Reg. No. 39,529    Reg. No. 45,899
Attorney for Applicants
c/o MINTZ, LEVIN
One Financial Center
Boston, Massachusetts 02111
Tel: (617) 542-6000
Fax: (617) 542-2241
**Customer No. 30623**

**UNITED STATES
PATENT AND
TRADEMARK OFFICE**

JAN 2 1 2003

Commissioner for Patents
Washington, DC 20231
www.uspto.gov

| APPLICATION NUMBER | FILING/RECEIPT DATE | FIRST NAMED APPLICANT | ATTORNEY DOCKET NUMBER |
|---|---|---|---|
| 10/028,248 | 12/19/2001 | Richard A. Shimkets | 21402-222 (Cura-522) |

**CONFIRMATION NO. 2131**

Ivor R. Elrifi
MINTZ, LEVIN, COHN, FERRIS,
GLOVSKY and POPEO, P.C.
One Financial Center
Boston, MA 02111

**FORMALITIES LETTER**

*OC000000009194345*

Date Mailed: 12/04/2002

## NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

### Filing Date Granted

Applicant is given **TWO MONTHS FROM THE DATE OF THIS NOTICE** within which to file the items indicated below to avoid abandonment. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

For questions regarding compliance to these requirements, please contact:

- **For Rules Interpretation, call (703) 308-4216**
- **To Purchase PatentIn Software, call (703) 306-2600**
- **For PatentIn Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov**

*A copy of this notice **MUST** be returned with the reply.*

Customer Service Center
Initial Patent Examination Division (703) 308-1202
PART 2 - COPY TO BE RETURNED WITH RESPONSE

# RAW SEQUENCE LISTING
## ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: ___10 /028,248___
Source: ___OIPE___
Date Processed by STIC: ___11/20/02___

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY
FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)
PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:
        http://www.uspto.gov/web/offices/pac/checker

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>, EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
   U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
                Or
   U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

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DATE: 11/20/2002   Explanation of
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28 <120> TITLE OF INVENTION: Novel Nucleic Acids and Polypeptides and Methods of Use
29        Thereof
31 <130> FILE REFERENCE: 21402-222
33 <140> CURRENT APPLICATION NUMBER: 10/028248
34 <141> CURRENT FILING DATE: 2002-10-31
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37 <151> PRIOR FILING DATE: 2000-12-19
39 <150> PRIOR APPLICATION NUMBER: 60/262959
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     18014 tgtatgagag cacaacctca gctcccccag aaccttccta cgacccctttc acggactctg 2820
     18015 aagaacggca gcttgagggc aatgacccct tgaggacact gtgagggcct ggacgggaga 2880
     18016 tgccagccat cactcactgc cacctgggcc atcaactgtg aattctcagc accagttgcc 2940
     18017 ttttaggaac gtaaagtcct ttaagcactc agaagccata cctcatctct ctggctgatc 3000
     18018 tggggggttgt ttctgtgggt gagagatgtg ttgctgtgcc cacccagtac agcttcctcc 3060
     18019 tctgacccatt tggctcttct tcctttgtac tcttcagctg gcacctgctc cattctgccc 3120
E--> 18020 tacatgatgg gtaactgtga tctttcttcc ctgttagatt gtaagcctcc ntctttgtat 3180
     18021 cccagcccct agcccagtgc ctgacacagg aactgtgcac aataaaggtt tatggaacag 3240
     18022 aaaaaaaaaa aaaaaaaaaa                                            3260
```

VARIABLE LOCATION SUMMARY                    DATE: 11/20/2002
PATENT APPLICATION:  **US/10/028,248**       TIME: 11:31:12

Input Set : **A:\Cura2221.app**
Output Set: **N:\CRF4\11192002\J028248.raw**

Use of n's or Xaa's(NEW RULES):
Use of n's and/or Xaa's have been detected in the Sequence Listing.
Use of <220> to <223> is MANDATORY if n's or Xaa's are present.
in <220> to <223> section, please explain location of n or Xaa, and which
residue n or Xaa represents.

Seq#:1; N Pos. 163,164,165,166,167,168,1279,1280,1281,1282,1283,1284
Seq#:2; Xaa Pos. 55,56,427,428
Seq#:3; N Pos. 1311,1312,1313,1314,1315,1316
Seq#:4; Xaa Pos. 371,372
Seq#:210; N Pos. 3171

```
                    VERIFICATION SUMMARY                    DATE: 11/20/2002
                    PATENT APPLICATION:  US/10/028,248      TIME: 11:31:12

                    Input Set : A:\Cura2221.app
                    Output Set: N:\CRF4\11192002\J028248.raw

L:34 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:66 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:1
M:340 Repeated in SeqNo=1
L:225 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:2
L:225 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:2
L:225 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:48
L:294 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:416
L:748 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:3
L:949 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:4
L:949 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:4
L:949 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:368
L:18020 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:210
```